

627.41 (73)

RIVERS AND FLOODS

By H. C. FRANKENFIELD, Meteorologist

An inspection of the table at the end of this report will show that there were no floods of consequence during the month of February. There were moderate floods in some of the South Atlantic and East Gulf rivers, and in the majority of the tributary streams of the Ohio River. There were also unimportant rises in the Illinois River, the Yazoo River of Mississippi, and the Sulphur and lower Trinity Rivers of Texas. All of these floods were properly forecast, and the resulting losses were insignificant. In North and South Carolina property valued at \$27,000 was saved through the warnings.

In the Arkansas River from Cimarron to Wichita, Kans., ice jams from February 5 to 13, inclusive, were productive of local floods. The ice conditions were said to have been the most severe in the history of the State of Kansas so far as is known, and extended for about 300 miles. Warnings were issued beginning with February 6, and thereafter when necessary until the ice had passed out. These warnings were the means of saving a large quantity of property and the reported losses were only \$15,050. A number of letters was received from interested parties highly commending the warnings issued from the Wichita office of the Weather Bureau.

River and station	Flood stage	Above flood stages—dates		Crest	
		From—	To—	Stage	Date
Arkansas:	Feet			Feet	
Dodge City, Kans.....	5	7	8	6.3	7
Yazoo:					
Yazoo City, Miss.....	25	(¹)	11	26.0	4-5
Tallahatchie:					
Swan Lake, Miss.....	25	(¹)	6		
Sulphur:					
Finley, Tex.....	24	(¹)	1		
North Platte:					
North Platte, Nebr.....	5	(¹)	14		
WEST GULF DRAINAGE					
Sabine:					
Logansport, La.....	25	29	(¹)		
Trinity:					
Liberty, Tex.....	25	28	(¹)		
Guadalupe:					
Gonzales, Tex.....	22	20	20	22.5	20
Victoria, Tex.....	16	21	23	19.2	22

¹ Continued at end of month. ² Ice gorge.³ Continued from last month. ⁴ Unknown; measurement impracticable prior to 12th.

MEAN LAKE LEVELS DURING FEBRUARY, 1924

By UNITED STATES LAKE SURVEY

[Detroit, Mich., March 4, 1924]

The following data are reported in the "Notice to Mariners" of the above date:

Data	Lakes ¹			
	Superior	Michigan and Huron	Erie	Ontario
Mean level during February, 1924:	Feet	Feet	Feet	Feet
Above mean sea level at New York.....	601.33	578.71	571.27	244.85
Above or below—				
Mean stage of January, 1924.....	-0.23	+0.13	-0.02	+0.06
Mean stage of February, 1923.....	-0.28	-0.13	+0.44	+0.38
Average stage for February last 10 years.....	-0.57	-1.17	-0.22	-0.44
Highest recorded February stage.....	-1.15	-4.01	-2.48	-2.82
Lowest recorded February stage.....	+0.57	-0.13	+0.64	+1.02
Average relation of the February level to:				
January level.....		(²)	-0.2	(²)
March level.....		-0.1	-0.2	-0.2

¹ Lake St. Clair's level: In February, 1924, 573.16 feet. ² Practically no difference.

EFFECT OF WEATHER ON CROPS AND FARMING OPERATIONS, FEBRUARY, 1924

By J. B. KINCER, Meteorologist

The first and middle parts of February were generally favorable for farm work in the Southern States, and the preparation of soil for spring planting made fairly good progress, although there was little plowing done in Oklahoma, and there was considerable delay in Arkansas and Tennessee by wet or frozen soil. It was too cool, however, for best growth of truck crops during much of the time in the Southeastern States, and there was considerable frost injury well toward the southern portion of the Florida Peninsula. In the west Gulf section temperatures were more favorable for truck and fairly good progress was reported. The latter part of the month was generally cold, cloudy, wet, and unfavorable for farm work throughout the South, although conditions were fairly favorable in parts of Florida. Planting was delayed and there was some damage by frost, while germination of truck crops was slow. At the close of the month, however, planting of early potatoes had been about completed in the commercial districts of South Carolina, and some progress had been made in the preparation of tobacco seed beds in Virginia.

The weather was rather unfavorable for wheat in the Ohio Valley area, where there was much complaint of damage by alternate freezing and thawing, especially in Kentucky and the southern portions of Indiana and Illinois. At the close of the month wheat was greening

River and station	Flood stage	Above flood stages—dates		Crest	
		From—	To—	Stage	Date
ATLANTIC DRAINAGE					
Neuse:	Feet			Feet	
Smithfield, N. C.....	14	21	23	16.1	21-23
Cape Fear:					
Elizabethtown, N. C.....	22	21	24	27.2	23
		29	(¹)		
Peedee:					
Mars Bluff, S. C.....	17	23	25	17.5	24
Santee:					
Rimini, S. C.....	12	(²)	5		
		23	(¹)	13.2	25
Ferguson, S. C.....	12	(²)	7		
		24	(¹)		
Broad:					
Blairs, S. C.....	15	28	29	16.2	28
Saluda:					
Chappels, S. C.....	14	28	(¹)	14.8	28
Broad:					
Carlton, Ga.....	11	27	27	11.0	27
Ocmulgee:					
Abbeville, Ga.....	11	1	2	11.9	1
EAST GULF DRAINAGE					
Tombigbee:					
Lock No. 4, Demopolis, Ala.....	39	27	(¹)		
Black Warrior:					
Lock No. 10, Tuscaloosa, Ala.....	46	28	(¹)	51.0	28
Chickasawhay:					
Enterprise, Miss.....	21	28	(¹)		
West Pearl:					
Pearl River, La.....	13	(²)	9		
MISSISSIPPI DRAINAGE					
Monongahela:					
Lock No. 15, Houl, W. Va.....	22	20	21	26.4	20
Lock No. 10, Morgantown, W. Va.....	25	20	20	26.1	20
Lock No. 7, Martin, Pa.....	30	20	21	30.8	20
Lock No. 4, Pa.....	31	21	21	32.8	21
Little Kanawha:					
Glenville, W. Va.....	23	20	20	26.2	20
Creston, W. Va.....	20	20	21	21.8	20
Hocking:					
Athens, Ohio.....	17	21	21	17.1	21
Green:					
Lock No. 4, Woodbury, Ky.....	33	22	23	33.9	23
Wabash:					
La Fayette, Ind.....	11	(²)	1	22.0	1
Terra Haute, Ind.....	16	3	9	17.2	3, 9
Vincennes, Ind.....	14	7	13	15.3	10, 13
Mount Carmel, Ill.....	16	6	12	17.8	10, 12
White, West Fork:					
Edwardsport, Ind.....	14	5	9	16.0	5, 9
Illinois:					
Peru, Ill.....	14	1	19	16.4	1, 19
		29	(¹)		
Henry, Ill.....	7	1	29	9.6	1, 29
Peoria, Ill.....	16	10	17	16.4	12-17
Havana, Ill.....	14	14	17	14.0	14-17
Beardstown, Ill.....	12	5	(¹)	14.3	5, 17

some in Missouri and was mostly in satisfactory condition, while favorable reports were received generally from the Great Plains States. Fall-seeded grains needed more moisture, however, in the Plateau districts of the West, but rainfall was beneficial in central and north Pacific States.

It was mostly unfavorable for seeding spring oats, especially the latter part of the month, where this work is usually in progress during February. Some oats had been sown at the close, however, northward to south-central Kansas, and seeding made fairly good progress in the extreme lower Great Plains. Some rice land was prepared in California and Louisiana.

The month was generally favorable for livestock interests in the great western grazing districts, although the cold, stormy conditions early in the month in the central Great Plains were hard on stock, especially in Kansas and Nebraska, while pastures continued short in Oklahoma. The range remained in good condition in Texas,

except locally in the western portion where it was too dry, and there was sufficient precipitation in much of the far Southwest to benefit range land. More moisture was needed, however, in the western Plateau districts, particularly in Utah and Nevada, while dry weather unfavorably affected pastures in southern California. Lambing made satisfactory progress the latter part of the month in southwestern districts, and shed lambing showed good results in the far Northwest.

The month, on the whole, was favorable for fruit. There was some complaint of injury to peach buds by cold weather in Missouri, and some buds were killed in Georgia, but on the whole frost damage during the month was not extensive. Early fruits were blooming in the east Gulf sections and parts of the Pacific coast, while the warm weather the last part of the month caused trees to blossom prematurely in Arizona. There was some damage by frost to berries in Florida, but citrus generally continued in good condition.

CLIMATOLOGICAL TABLES CONDENSED CLIMATOLOGICAL SUMMARY

In the following table are given for the various sections of the climatological service of the Weather Bureau the monthly average temperature and total rainfall; the stations reporting the highest and lowest temperatures, with dates of occurrence; the stations reporting the greatest and least total precipitation; and other data as indicated by the several headings.

The mean temperature for each section, the highest and lowest temperatures, the average precipitation, and the greatest and least monthly amounts are found by using all trustworthy records available.

The mean departures from normal temperatures and precipitation are based only on records from stations that have 10 or more years of observations. Of course, the number of such records is smaller than the total number of stations.

Condensed climatological summary of temperature and precipitation by sections, February, 1924

Section	Temperature								Precipitation					
	Section average	Departure from the normal	Monthly extremes						Section average	Departure from the normal	Greatest monthly		Least monthly	
			Station	Highest	Date	Station	Lowest	Date			Station	Amount	Station	Amount
Alabama	° F. 47.0	° F. -0.8	Selma	81	15	Valley Head	12	6	In. 4.65	In. -0.67	Leeds	In. 7.34	Union Springs	In. 1.43
Alaska														
Arizona	48.7	+2.5	Continental	92	17	Springerville	3	13	0.05	-1.17	St. Johns	0.69	Ajo	0.00
Arkansas	42.9	+0.7	Subiaco	83	14	Gravette	-7	6	2.26	-1.02	Portland	6.36	Fayetteville	0.00
California	53.3	+4.8	2 stations	91	13	Helm Creek	-9	11	1.76	-2.50	Inskip	10.02	29 stations	0.60
Colorado	31.4	+4.6	Lamar	80	14	Dillon	-30	24	0.51	-0.58	Savage Basin	2.41	7 stations	T.
Florida	58.0	-2.6	Gainesville	88	19	4 stations	24	10	3.30	+0.17	Arcadia	6.86	Sand Key	0.38
Georgia	46.7	-1.2	Valdosta	84	15	Clayton	10	22	3.96	-1.01	Clayton	7.35	Brunswick	1.89
Hawaii														
Idaho	34.5	+7.3	stations	67	14	Warren	-9	9	1.55	-0.10	Warren	5.63	Deer Flat	0.62
Illinois	30.5	+2.8	Harrisburg	70	3	Mount Carroll	-6	22	1.56	-0.52	Fairfield	2.37	Mount Vernon	0.66
Indiana	30.1	+0.9	Rome	70	3	Goshen	-6	23	1.62	-1.03	Valparaiso	2.39	Goshen	0.63
Iowa	25.8	+5.3	Clarinda	70	3	Decorah	-15	22	1.27	+0.12	Lacona	4.00	Algona	0.30
Kansas	35.7	+3.4	2 stations	81	14	2 stations	-10	21	0.82	-0.30	Walnut	3.55	Minneapolis	0.10
Kentucky	36.0	0.0	do	71	13	Farmers	9	22	2.56	-0.97	Middlesboro	5.10	Louisville	1.46
Louisiana	52.5	-0.5	Newellton	81	16	Robeline	12	6	4.94	+0.37	Franklin	7.67	St. Francisville	2.06
Maryland-Delaware	32.4	0.0	Princess Anne, Md.	68	5	Grantsville, Md.	-13	24	3.47	+0.40	Millington, Md.	4.48	Public Landing, Md.	2.09
Michigan	19.9	+1.7	2 stations	52	26	Humboldt	-35	23	1.79	+0.10	Traverse City	3.10	Eagle Harbor	0.53
Minnesota	18.8	+8.1	Pipestone	66	28	2 stations	-29	22	0.52	-0.26	Grand Marais	1.80	Waskish	0.04
Mississippi	48.3	-0.3	Macon	83	15	Holly Springs	18	6	4.51	-0.43	Hickory	7.49	Hernando	1.53
Missouri	33.8	+2.0	Hollister	70	14	3 stations	-8	16	1.88	-0.27	Lamar	3.00	Seymour	0.60
Montana	31.5	+10.0	Chinook	67	12	Browning	-27	20	0.84	+0.06	Heron	3.82	Sunset Orchard	T.
Nebraska	30.7	+5.8	North Loup	72	3	2 stations	-15	18	0.82	+0.10	Ainsworth	2.70	Hebron	T.
Nevada	41.5	+6.8	Las Vegas	84	17	do	2	11	0.55	-0.37	Owyhee	1.06	6 stations	0.00
New England	18.3	-3.8	Turners Falls, Mass.	54	27	Van Buren, Me.	-28	9	2.38	-0.83	Bristol, R. I.	4.45	Bethlehem, N. H.	0.90
New Jersey	29.9	-1.0	Bridgeport	62	4	Layton	-3	25	4.10	+0.40	Indian Mills	6.11	Newton	2.45
New Mexico	38.8	+1.4	Boaz	85	10	Harvey's Upper Ranch	-13	4	0.41	-0.33	Lee's Ranch	4.11	2 stations	0.00
New York	18.8	-2.8	2 stations	53	14	Wanakana	-26	18	2.66	-0.17	Flushing	4.92	Lauterbrunnen	0.64
North Carolina	39.9	-1.8	do	76	5	Banners Elk	-2	9	4.35	+0.28	Edenton	7.35	Cullowhee	2.01
North Dakota	20.3	+12.4	Berthold Agency	67	11	2 stations	-27	21	0.41	-0.08	Foxholm	1.01	2 stations	T.
Ohio	28.7	+0.1	Clarington	75	4	Canfield	-8	24	2.02	-0.47	Middleport	4.18	Defiance	0.9
Oklahoma	42.2	+2.8	Altus	88	15	Spavinaw	-5	6	0.93	-0.48	McAlester	3.55	Buffalo	T.
Oregon	43.0	+5.9	Riddle	74	13	Crater Lake	1	9	3.05	-0.52	Astoria	11.52	Silver Lake	0.05
Pennsylvania	26.9	-0.4	Uniontown	70	4	West Bingham	-25	24	2.94	+0.11	Pottsville	5.16	Erie	1.27
Porto Rico														
South Carolina	44.2	-2.8	Yemassee	78	18	2 stations	13	9	3.54	-0.85	Walhalla	6.32	Garnett	1.41
South Dakota	25.4	+8.1	Tyndall	68	2	La Delle	-23	21	0.93	+0.37	Spearfish	3.57	Victor	0.13
Tennessee	39.3	-1.0	3 stations	70	13	2 stations	6	17	3.99	-0.10	Clinton	5.83	Paris	1.44
Texas	49.8	-0.5	San Benito	95	4	Clint	8	5	2.49	+0.69	Freeport	8.31	Childress	0.00
Utah	35.9	+6.0	St. George	75	12	Panguitch	-7	1	0.28	-1.00	High Line City Creek	1.74	12 stations	0.00
Virginia	35.5	-1.1	Runnymede	72	5	Burkes Garden	2	9	2.67	-0.47	Runnymede	4.27	Winchester	0.82
Washington	44.1	+7.4	Hanford	71	12	Snyder's Ranch	-1	9	4.42	+0.91	Forks	23.98	Attalla	0.27
West Virginia	31.6	-0.4	Juneau	74	4	Cheat Bridge	-16	16	3.21	+0.15	Pickens	8.18	Upper Tract	0.84
Wisconsin	20.3	+4.8	3 stations	50	126	Long Lake	-31	23	1.09	-0.08	Manitowoc	2.78	Iron River	0.22
Wyoming	27.6	+5.8	Pinebluff	68	14	Moran	-27	24	0.73	-0.04	Dome Lake	3.06	Powell	0.04

¹ For description of tables and charts, see REVIEW, January, 1924, pp. 56-57.

² Other dates also.